

CLAIMS

1. A method for attenuating a microorganism which comprises inhibiting in the microorganism a metabolic pathway essential for viability, by promoting use of the substrate of the pathway in a different metabolic pathway which is non-essential to the microorganism whereby the substrate is unavailable to the essential pathway and the micro organism is attenuated.
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2. A method as claimed in claim 2 and wherein the presence or absence of a nutrient determines whether a metabolic pathway is essential or non-essential to the microorganism.
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3. A method as claimed in claim 1 and wherein use of the substrate in the non-essential pathway is promoted by inhibition of an enzyme not in the essential pathway.
- 15 4. A method as claimed in claim 4 and wherein the enzyme to be inhibited is a kinase.
5. A method as claimed in claim 4 and wherein the enzyme to be inhibited is isocitrate dehydrogenase (*icdI*).
- 20 6. A method as claimed in claim 1 and wherein the microorganism is *Mycobacterium tuberculosis*.
7. A method as claimed in claim 6 and wherein the enzyme to be inhibited is *pknG*.
- 25 8. A method for identifying compounds that attenuate *Mycobacterium tuberculosis* which method comprises testing compounds in a test system for their ability to bind to *pknG* and prevent autophosphorylation.
9. A method for identifying compounds that attenuate *Mycobacterium tuberculosis* which method comprises testing compounds in a test system for their ability to bind to *pknG* and prevent phosphorylation of *icdI* or a peptide derived from *icdI*.
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10. A method for identifying compounds that attenuate *Mycobacterium tuberculosis* which method comprises testing compounds in a test system for their ability to bind to *icd1* or a peptide derived from *icd1* and prevent phosphorylation of *icd1* by *pknG*.

5 11. A method for identifying compounds that attenuate *Mycobacterium tuberculosis* which method comprises testing compounds in a test system for their ability to prevent the phosphorylation and or inactivation of *icd1*.

12. An anti-microbacterial compound identified according to the method of any one of
10 claims 8-11.